

# Accuracy Characteristics for Final Delivery Cumulative Encounter Counts – Single Site

## 1 Introduction

This document contains summary scenario characteristics for aircraft and airspace encounters for hours 1100 to 2100 GMT recorded on May 26, 1999 at Memphis ARTCC and cover either the ZME or ZID airspace. Characteristics provided are a total count of aircraft and airspace encounters partition by select horizontal separation intervals. Definitions of the scenario characteristics are provided in Reference[1].

## Reference

[1] Paglione, M., Oaks, R., Ryan, Dr. H., Summerill, J.S., (Final, January 2000), *Description of Accuracy Scenarios for the Acceptance Testing of the User Request Evaluation Tool (URET) / Core Capability Limited Deployment (CCLD)*, FAA William J. Hughes Technical Center / ACT-250, Atlantic City, New Jersey.

## 2 Aircraft Encounter Distributions

The statistics collected in this section characterize aircraft to aircraft encounters. The encounter counts are partitioned by selected minimum horizontal separation intervals, with and without adherence for both current and trial plan rules. This section corresponds to Section 3.2.1 in Reference[1].

### 2.1 Count Partitioned by Minimum Horizontal Separation

This section corresponds to Section 3.2.1.1 in Reference[1].

**Table 1: Total Count of Current Plan Aircraft Encounters**

Minimum Horizontal Separation (nm)	Without Adherence	Adherence for at least 13 Minutes
$0 \leq d < 5$	852	548
$5 \leq d < 10$	1091	636
$10 \leq d < 15$	1365	795
$15 \leq d < 23$	2775	1630
$23 \leq d < 30$	2391	1441
Total	8474	5050

**Table 2: Total Count of Trial Plan Aircraft Encounters**

Minimum Horizontal Separation (nm)	Without Adherence	Adherence for at least 20 minutes
$0 \leq d < 5$	852	519
$5 \leq d < 10$	1091	609
$10 \leq d < 15$	1365	751
$15 \leq d < 24$	3138	1747
$24 \leq d < 30$	2028	1177
Total	8474	4803

### 3 Airspace Encounter Distributions

The statistics collected in this section characterize aircraft to airspace encounters. The encounter counts are partitioned by selected minimum horizontal separation intervals, with and without adherence for both current and trial plan rules. This section corresponds to Section 3.2.2 of Reference[1].

#### 3.1 Count Partitioned by Minimum Horizontal Separation

The section corresponds to Section 3.2.2.1 of Reference[1].

**Table 3: Total Count of Current Plan Airspace Encounters by Horizontal Separation**

Minimum Horizontal Separation (nm)	Without Adherence	Adherence for at least 13 minutes
Conflicts <sup>1</sup>	13274	11366
$d = 0^2$	221	185
$0 < d < 7$	5071	4075
$7 \leq d < 9$	1356	1046
$9 \leq d < 11$	1188	896
$11 \leq d < 16$	3145	2497
$16 \leq d < 30$	10769	8476
Total	35024	28541

**Table 4: Total Count of Trial Plan Airspace Encounters by Horizontal Separation**

Minimum Horizontal Separation (nm)	Without Adherence	Adherence for at least 20 minutes
Conflicts <sup>1</sup>	13274	11120
$d = 0^2$	221	180
$0 < d < 8$	5783	4546
$8 \leq d < 11$	1832	1375
$11 \leq d < 13$	1144	873
$13 \leq d < 19$	4312	3426
$19 \leq d < 30$	8458	6411
Total	35024	27931

<sup>1</sup> This count includes encounters that are conflicts. By definition the minimum horizontal separation is zero and the track point actually penetrates the airspace.

<sup>2</sup> This count includes encounters without valid airspace penetrations, which occurs under two cases: a short duration penetration or an encounter on the actual buffered boundary of the airspace which does not penetrate.